

## ABSTRACT OF THE DISCLOSURE

A multimedia packet re-multiplexer system having a plurality of multimedia sources, each multimedia source sending incoming multimedia packets, each packet having a header which includes a packet identifier (PID) to determine the packet type.

- 5 The system includes an interface multiplexer (mux) for periodically scanning the multimedia sources for the incoming packets. The system also includes a main storage device for storing each incoming packet, a secondary storage device having a cut-through mechanism for storing the header of each incoming packet, an input classifier for selecting a process for each packet stored in the main storage device, in
- 10 accordance with the corresponding header from the secondary storage device. In addition the system includes a plurality of processors, each corresponding to a packet type and an input dispatcher for sending each packet from the main storage device to one of the plurality of processors selected in accordance with availability, such that the cut-through mechanism provides efficient digital video processing via the plurality of
- 15 processors, enabling gigabit bandwidth throughput for digital video re-multiplexing.